

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) An exhaust-heat recovery system ~~for engine~~ a vehicle comprising:

a catalytic converter configured to let pass through which exhaust discharged from an engine ~~is passed~~ and to burn catalytically in which combustible components in the exhaust ~~are burned through catalysis~~;

an exhaust heat exchanger configured to exchange heat ~~where heat is exchanged~~ between the exhaust having passed through the catalytic converter and a heat-transfer medium having passed through the engine;

an air conditioner with a heat exchanger configured to generate for heating ~~where~~ a heating wind ~~is generated~~ by means of the heat exchange between the heat-transfer medium having passed through the exhaust heat exchanger and an air conditioning wind; and

an engine controller configured to perform an ~~for performing~~ incremental control for increasing the ~~on the~~ combustible components in the exhaust to be burned in the catalytic converter by means of changing an operation condition of the engine ~~when the prescribed condition for a prescribed heating condition~~ is ~~not satisfied~~ unsatisfied.

2. (Original) The exhaust-heat recovery system according to claim 1, wherein the incremental control on the combustible components is such that the amount of unburned hydrocarbon in the exhaust discharged from the engine is increased.

3. (Original) The exhaust-heat recovery system according to claim 1, wherein the incremental control on the combustible components is performed when the vehicle is at rest but the engine is still in operation.

4. (Currently Amended) The exhaust-heat recovery system according to claim 1, wherein the prescribed heating ~~condition for heating~~ is specified by at least one of a temperature of the heat-transfer medium, a demand for an increase in heating power of the air conditioner, and an exchanged heat quantity in the exhaust heat exchanger.

5. (Currently Amended) The exhaust-heat recovery system according to claim 4, wherein the temperature of the heat-transfer medium is measured at, at least one of a heat-transfer medium channel from the engine to the exhaust heat exchanger, a heat-transfer medium channel from the exhaust heat exchanger to the heat exchanger~~for heating~~, a heat-transfer medium channel from the heat exchanger~~for heating~~ to the engine, a heat-transfer medium passage within the engine, a heat-transfer medium passage within the exhaust heat exchanger and a heat-transfer medium passage within the heat exchanger~~for heating~~.

6. (Original) The exhaust-heat recovery system according to claim 4, wherein the demand for an increase in heating power of the air conditioner is outputted from the air conditioner on the basis of at least one of the difference between a target temperature in the vehicle set by an occupant and an actual temperature in the vehicle or an actual temperature outside the vehicle, and a target temperature of an air conditioning wind at an outlet thereof.

7. (Original) The exhaust-heat recovery system according to claim 4, wherein the exchanged heat quantity in the exhaust heat exchanger is calculated from at least one of the difference between a temperature of the heat-transfer medium at an inlet portion of the exhaust heat exchanger and that at an outlet portion of the exhaust heat exchanger, the difference between a temperature of the exhaust at an inlet portion of the exhaust heat exchanger and that at an outlet portion of the exhaust heat exchanger, the difference between a volumetric flow rate of the exhaust at an inlet portion of the exhaust heat exchanger and that at an outlet portion of the exhaust heat exchanger, the exhaust volume in the engine, the exhaust temperature in the engine, the amount of fuel used in the engine, and the amount of air used in the engine.

8. (Original) The exhaust-heat recovery system according to claim 1, further comprising:

- a bypass channel along which the exhaust having passed through the catalytic converter passes bypassing the exhaust heat exchanger;
- a main channel along which the exhaust having passed through the catalytic converter passes through the exhaust heat exchanger; and
- an exhaust channel switching valve for closing either the bypass channel or the main channel.

9. (Original) The exhaust-heat recovery system according to claim 1, wherein the exhaust discharged from the engine passes sequentially through the catalytic converter, the exhaust heat exchanger and a muffler toward the downstream side of the engine, and then is discharged into the air.

10. (Currently Amended) The exhaust-heat recovery system according to claim 1, wherein the heat-transfer medium flows out of the engine, and then passes sequentially through the exhaust heat exchanger and the heat exchanger ~~for heating~~, and returns to the engine.

11. (Currently Amended) The exhaust-heat recovery system according to claim 1, further comprising:

a bypass channel along which the heat-transfer medium is directly delivered bypassing the exhaust heat exchanger from the engine to the heat exchanger ~~for heating~~;

a main channel along which the heat-transfer medium passes through the exhaust heat exchanger; and

a medium ~~an medium~~ channel switching valve for closing either the bypass channel or the main channel.

12. (Currently Amended) The exhaust-heat recovery system according to claim 1, further comprising:

an oil warmer configured to generate ~~for generating~~ the heat exchange between the heat-transfer medium and a transmission lubricant on the downstream side of the heat exchanger ~~for heating~~.

13. (Currently Amended) The exhaust-heat recovery system according to claim 12, further comprising:

a bypass channel along which the heat-transfer medium passes bypassing the oil warmer;

a main channel along which the heat-transfer medium passes through the oil warmer;  
and

a warmer ~~an warmer~~ switching valve for closing either the bypass channel or the main channel.

14. (New) The exhaust-heat recovery system according to claim 1, wherein the prescribed heating condition is a minimum temperature of a coolant.